

# Questioning assumptions. Vivienne: a case study of e-learning in music education

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## Abstract

This article explores the capacity of e-learning to deliver positive outcomes in Music education to pre-service teachers, through the experience of Vivienne, a geographically distant, pre-service teacher studying a four year Bachelor of Education degree. The widely reported characteristics of pre-service teachers studying Music education within Education degrees, including a lack of entry-level experience, and a self-reported lack of confidence and competence in this area, may suggest that programs that enable students to challenge these assumptions will deliver the best outcomes for them. However can such assumptions be challenged in a constructive way in a fully online mode of study, enabling such students to value the role of Music in education? What is necessary for this to occur in this mode? Vivienne's experience of e-learning in Music education is characterised by a depth of learning and engagement that enabled her to overcome her fixed ideas of her own musical abilities and to challenge her preconceptions about the value of Music in education.

Her case suggests that if this is so for her, then it may be so for others. This article concludes by asking in what ways the affordances of this mode can be harnessed to ensure that what is so in Vivienne's case can also be so for others?

**Key words:** E-learning, teacher, online, music

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## Introduction

E-learning provides many affordances for higher education, including improved access to tertiary education for geographically distant students via ubiquitous communication technologies. However, is e-learning appropriate to all domains? What if broader institutional objectives require an academic to teach in this mode, despite their well-argued and deeply held objections to its appropriateness for the domain? Can e-learning enable pre-service teachers to study constructivist approaches to learning and teaching in Music education? Improved access to higher education is essentially just a starting point for the student. What if students learning

in this mode encounter learning and teaching transactions that do not take into consideration the limitations and possibilities of technology-mediated, asynchronous learning?

These questions are all valid and important for many academics, however, although most are perhaps implicit in the case study, this article does not specifically seek to address each of them. Rather, it seeks to question the capacity of e-learning to enable pre-service teachers to engage deeply in Music education as a part of their study, and to thereby address some of the fundamental issues of self-efficacy so prevalent amongst these students. The research presented in this article is part of a three year exploration

of the perceptions of students studying a unit in Music education within a generalist Bachelor of Education degree. The context and background of the study are outlined in previously published research (Baker 2011a, 2011b, 2012, 2013a, 2013b; Baker & Pittaway, 2012), and will therefore not feature prominently in this article. Rather than presenting an analysis of data from across participant cohorts this article explores the question of capacity through the experiences of Vivienne, a geographically distant, pre-service teacher studying in the e-learning mode.

This article presents literature pertinent to Music education and e-learning, with attention to some of the current imperatives to ensure outcomes for pre-service early childhood and primary teachers. The methodological approach used in this study is outlined, with particular attention to thematic, inductive data analysis, and to the generalisability or otherwise of the case study approach. The case of Vivienne is then presented. In conclusion the author returns to the question of the capacity of the e-learning mode to enable pre-service teachers to learn deeply in Music education, and to thereby overcome some of the reported assumptions that can define this cohort. Vivienne's experience as described in the case study illustrates the centrality of positive dispositions towards learning to success in studying Music education in the e-learning mode. This article concludes by asking in what ways can the affordances of this mode be harnessed to ensure that what is so in Vivienne's case may be so in other cases?

## Literature

The education of pre-service generalist primary and early childhood teachers in Music education has been widely acknowledged for some years as problematic (Abril, 2007; Baker, 2007a, 2007b, 2011a, 2011b; Bamford, 2006; Commonwealth of Australia, 2005; Garvis & Pendegast, 2011; Jeanneret, 2006; Russell-Bowie, 2002; Russell-Bowie & Dowson, 2005), just to acknowledge a few. The significant issues in the education

of these pre-service teachers seem to focus on lack of adequate time in Education degrees, lack of background experience in Music, and low levels of competence, confidence and self-efficacy in working with Music. In their recent study Garvis and Pendegast (2011) found that "early childhood teachers had greater perceived competence for teaching maths and English compared to any of the arts strands" (p. 1). Bamford (2006) maintains that 'the lack of time dedicated to art[s] education, especially in generalist teacher training, is compounded by the lack of entering ability possessed by students' (p. 80). Russell-Bowie and Dowson (2005) conducted a survey of 936 pre-service primary teachers in Australia, Namibia, South Africa, USA, and Ireland. They found that "in every creative arts area background is very strongly, and positively, predictive of confidence and enjoyment in teaching".

Yet despite these manifold, significant issues, according to Bamford (2006, p. 75) "the majority of art[s] teaching in primary schools is done by generalist teachers", and this is certainly also the case in early childhood education (Roy, Baker & Hamilton, 2012). The recent endorsement of the first national Arts curriculum by the Minister for Education on 30 July, and the place of the Arts under the organiser of communication in *Belonging, Being & Becoming: The Early Years Learning Framework for Australia* (Commonwealth of Australia, 2009) add significant weight to the need for greater time in preparing pre-service teachers in the teaching of Music. Over the last two decades there has also been a roughly contemporaneous shift in university learning and teaching, from purely face to face teaching to more reliance upon online or e-learning. Furthermore, expanding adaption of broadband, in whatever 'flavour' this may ultimately be, will most likely only increase reliance on e-learning. The capacity of online learning to at the very least maintain outcomes in Music education for pre-service teachers, is therefore a valid and timely area of inquiry.

Previous articles presenting findings from the different stages of this research project have highlighted the expansion of e-learning in higher education (Baker, 2011a; 2011b; 2012; 2013a; 2013b; Baker & Pittaway, 2012), and this literature will not be re-presented here. Recently, however, based on data published in April this year, IBISWorld (2013) reported that "the Online Education industry has grown at a rapid pace. Technological advancements and faster internet speeds have allowed the online model to become a more viable method of learning. With more individuals and businesses recognising the benefits of online education, the uptake of online learning has soared over the past five years". Digolo, Andang'o and Katuli (2011) refer to the massive adoption of e-learning as "a universal educational trend that must be adopted by all institutions of higher learning" (p. 138). In their report *Technology Outlook for Australian Tertiary Education, 2012-2017*, Johnson, Adams, and Cummins (2012) refer to the latest expression of the e-learning phenomenon: the Massively Open Online Course (MOOC) that can enrol thousands of students, although the pedagogical validity, value and indeed purpose of such courses is far from generally understood or accepted.

The affordances of e-learning should be of particular interest to Music educators, as Cayari (2011) writes "Educators and artists alike are seeing new ways to express their art through technological means. Digital technology has brought with it new media". However this is not always the case. Johnson, Adams, and Cummins (2012, p. 4) refer to the "pervasive resistance of academics to the personal adoption and use of new technologies or techniques". Some study has been made of the broad application of online technologies to Music education however. Salavuo (2006) and Waldron (2012) explored online musical communities. However the nature of these communities were fundamentally different to those found within a formal university setting. Seddon and Biasutti (2009a; 2009b) studied

the asynchronous learning of the piano and the use of email, however, remote facilitation by email rather than a Learning Management System (LMS) is not regarded for the purposes of this study as e-learning. Seddon and Biasutti (2009b) do however acknowledge the limitations of research in e-learning suggesting that more attention should be paid to learner perspectives of e-learning. This focus on the perspectives of pre-service teachers of their e-learning experiences is the focus of this research project. Recently, Partti and Westerlund (2013) employed a qualitative instrumental case study in the investigation of collaborative composition in an online Music community. They concluded that "digital and virtual technologies enable the process of composing to become public and open up opportunities for collaboration" (p. 219), and thereby highlighted the collaborative advantages of ICTs in Music education.

Cooper, Dale and Spencer (2009) explored the use of iPods in the delivery of a popular Music course in a university context, the most pertinent finding of which was that students "claimed that their sense of motivation and engagement was significantly increased as a result of using the podcasts" (p. 92). Salavuo (2008) explored the use of Social Networking Platforms (SNPs) like MySpace or Facebook in Music education. He concludes that SNP's offer more flexible and informal means of constructivist learning for Music students than formal Learning Management Systems (LMSs) that he maintains place the learner as a 'receiver' of knowledge rather than a constructor of knowledge. The characteristics of motivation and engagement in an e-learning context have been explored in this research (Baker & Pittaway, 2012), and are likewise evident in this case study. This study is, however, based on the use of LMS platforms to engage in constructivist learning through carefully scaffolded learning activities, completed by pre-service teachers in their particular learning contexts, for example with family, friends, or in schools.

## Method and procedures

This three year, ongoing research project has been framed within constructivist ontology (Blaikie, 1993; Burns, 1998; Denzin & Lincoln, 1994; Patton, 1990; Sarantakos, 2005). According to Hatch (2002) the constructivist paradigm is one in which "individual constructions of reality compose the knowledge of interest to the constructivist researcher" (p.15). This project has explored the individual realities of those engaged in studying Music education in an e-learning mode. According to Denzin and Lincoln (1994) "realities are apprehendable in the form of multiple, intangible and mental constructions, socially and experientially based, local and specific in nature" (p.111). This project employed a multiple method approach to research (survey and semi-structured interview).

The sample for the project has been selected using 'purposeful' techniques (Creswell, 2012; Denscombe, 2007; Hatch, 2002; Patton, 1990; Sarantakos, 2005). Denscombe (2007) writes that this term "is applied to those situations where the researcher already knows something about the specific people or events and deliberately selects particular ones because they are seen as instances that are likely to produce the most valuable data" (p.17). Pre-service teacher participants were best placed to inform this investigation. Following approval from the university ethics committee, and the release of grades, all students who had been enrolled in the unit at census date were invited to participate in the online survey. Following the completion of the online survey all students were again invited to participate, this time in a semi-structured interview. Pre-service teachers therefore 'self-selected' for their participation in this research. Thus far there have been three such data collection periods from 2010 to 2012 inclusive, producing what Braun and Clarke (2006, p. 79) refer to as a "corpus" of data.

Those data used in this article were collected from a participant in the 2011 (second) collection

stage and are not a data "set" as Braun and Clarke (2006) mean this term to be used, because the study itself does not seek to draw on data from elsewhere in the project as primary sources, but rather to describe the experience of the case. Being based in a single case it could best be referred to as a data "extract" (Braun & Clarke, 2006, p. 79). Interviews were conducted using Blackboard Collaborate web conferencing, and following transcription subjects were provided with transcripts of their interviews and asked to check these for accuracy.

According to Punch (2009) interviews are "a very good way of accessing people's perceptions, meanings, and definitions of situations and constructions of reality" (p.144). Interview subjects were sent copies of the schedule well in advance of their participation. Sarantakos (2005) writes that "Qualitative interviews employ a readiness to change, to correct and adjust the course of study as required by the research. Interviewers are expected to engage in open discussion with the respondent, and to maintain a stimulating, but not dominating role" (p.270). Despite the development of an interview schedule therefore, and mindful of the need for reliability (O'Leary, 2010), the individual responses of subjects drove the interview process wherever possible.

Throughout this research project interview data sets have been analysed using inductive category construction (Miles & Huberman, 1984; Hatch, 2002; Sarantakos, 2005), or what Braun and Clarke refer to as thematic, inductive analysis (2006). Thematic, inductive analysis searches for evidence of themes across data, coding themes directly from data, thus being based specifically on words or phrases in participant data. O'Leary (2010) defines validity as "true value" or "whether methods, approaches, and techniques actually relate to what is being explored" (p. 43). This study's use of inductive thematic analysis increased validity by ensuring that the themes that emerged from data were based directly on the words and phrases of participants. According

to Hatch (2002) the inductive approach "proceeds from the specific to the general. Understandings are generated by starting with specific elements and finding connections among them" (p. 161). Hatch (2002) states that "inductive data analysis is a search for patterns of meaning in data so that general statements about phenomena under investigation can be made" (p. 161). In this case data were input into data maps or matrices, through which themes were explored and ultimately coded. Vivienne's identity is protected through the use of a pseudonym.

Case study is the study of a bounded entity (Denzin & Lincoln, 1994; Burns, 1998). According to Stake (2000), a "case study is not a methodological choice but a choice of what is to be studied. By whatever methods, we choose to study the case" (p. 435). The case study approach was selected here because the focus of this research is on a depth of understanding of the perceptions of e-learners. Earlier publications have reported these perceptions more broadly (Baker, 2011a, 2011b, 2013a; Baker & Pittaway 2012); however the presentation of a single case enables a greater depth of examination to occur.

Burns (1998) maintains that the generalisability of the case study has intrinsic value as a means of encouraging future research "by showing that things are so, or that such an interpretation is plausible in a particular case and therefore might be so in other cases" (p. 365). In the case of this article, as Stake (2000, p. 439) states "The search for particularity competes with the search for generalizability", however the use of an "instrumental case study" enables an examination of the complexities of the case, but in a manner that illuminates an "understanding of something else" (p. 437). The "something else" of this case study being the learning in Music education that was possible for an online learner with all of its concomitant complexities and particularities. Denscombe (2007) provides some useful insights into the value of presenting this research as a single case study, stating that

"the logic behind concentrating efforts on one case rather than many is that there may be insights to be gained from looking at the individual case that can have larger implications... The aim is to illuminate the general by looking at the particular" (p.36).

Vivienne has been selected as a case study for this paper, for three reasons. Firstly, as a geographically distant, mature age student, who also works as a teaching aide, she is representative of many students in the degree. Secondly, Vivienne characterises herself as lacking musical ability, a known characteristic of many Education students. Finally, Vivienne's attitudes to Music education evolved significantly during her study, and these changes illustrate that such attitudes may be successfully challenged in an e-learning mode.

## Case study: Vivienne

Based in the state of Victoria, Vivienne has completed one year part time of the Bachelor of Education degree in an e-learning mode. Vivienne lost her husband to cancer seven years ago, and she has spent the last five years working as a teaching assistant in a high needs special developmental school in an outer suburban area of Melbourne, where her son is also a student. Through her work and study Vivienne feels like:

*I am probably a new person...I've got 45 years; but I feel like I am a different person with only 7 years. I felt who I was and who I am today, are two different people...Who I am today is the same person, with the same foundations, but with a completely different outlook on life, what's relevant and important, and what's not.*

At the outset Vivienne had a distinct lack of confidence in working with music; but most notably she didn't see a need to include Music education in her thinking or her teaching practice:

*I felt that I would not be a Music and arts teacher. I wanted to be a class teacher. I saw it as a separate*

*unit, I saw specialist and class teacher as different. Not really connecting it to the curriculum. Initially I did not know what I would gain from this as I am not musical or artistic and would not be teaching Music or arts.*

This characterisation of herself as lacking musical ability, and the lack of confidence she expresses is, as noted earlier, a commonly reported characteristic amongst generalist Education students.

This initial attitude towards Music education changed however as Vivienne engaged in the e-learning mode of the unit, and by the time of her interview several months after the completion of the unit, her understanding about the value of Music education in schools has changed, and she expresses genuine discomfort at her earlier beliefs: *Some teachers do not hold much regard for specialist classes. I used to hold that belief to a degree myself, now I see just how linked to the whole curriculum Music and the arts actually is...I use Music every day when I am working with these kids...They have underlying issues that impact their problems, but they are learning and expressing themselves in ways they had never before. I am a little disturbed that I didn't realise how important Music and arts were and I am also disturbed that there are teachers still out there that hold that belief.*

Vivienne indicates that her transformed attitude to Music education is more than just a momentary realisation, with Music becoming an important component of her ongoing professional practice, stating that:

*The one unit I was terrified of was music...yet it became my sanity last year. It helped me more than my other units. What I bring to the kids that I'm working with, the same ones this year. I have the glockenspiel and the claves; this is how I am getting them to identify two letter common words, to increase their vocabulary and understandings. It's been pretty phenomenal...I miss the unit...I am*

*not terrified to teach it; I am looking forward to it as an Integration Aide.*

Vivienne's attitude to Music education and her confidence in working with it in her classroom illustrates how this change can be facilitated in an e-learning context, how the same issues of confidence and understanding evident in a face to face mode can be addressed successfully in an e-learning mode.

Vivienne refers to her use of a series of demonstration videos in Music education provided for online students as being important to her learning, stating that:

*I loved those because I felt like I was there. I got to see it in action. In all my other units last semester and this semester, you can hear the lecturer, but you can't see them...I think, when you see something, you connect with it at a deeper level. I thought they were invaluable and enjoyable, because I could see you in action and put a name to the face. I think that makes a difference...The videos were a real strength for me...When I saw the visuals it all made sense. I really enjoyed that factor.*

It is clear from the interview data that there is more to Vivienne's changed perceptions, and her success in using music, than just her application of the learning embedded in these videos. What is apparent is an attitude to her learning that allowed these positive outcomes to be developed. This attitude to learning resulted in Vivienne taking a demonstration video activity and applying it to her professional context, this process involving risk taking, personal motivation and persistence. This is important because, although vicarious learning does occur in an e-learning context, it is reasonable to suggest that passive approaches to learning in this mode may compromise the quality of that learning. This attitude to learning is critical to understanding this case:

*Initially I was fearful and was thinking I could not do this in front of a class. Whilst I could do it at*

*home no problem as no one was watching. I was thinking how I could transfer this to the classroom and manage it. One of the earlier lectures said, you have to be fearless and have to embrace and engage. That's the key and I have got to change the way I think and the preconceived ideas or attitudes that I had...so I just jumped in.*

A similar initial reluctance was also evident in Vivienne's use of discussion boards, with her again expressing the need to overcome her personal fears in order to gain the advantages that these offer to e-learning students:

*Initially I was fearful of posting as I would feel terrible if I posted something wrong or gave wrong advice. Once I got over that feeling, I overcame self-criticisms and judgements and started interacting with others; it made me feel good. The feeling of helping someone and then someone helping me, the give and take, it's a great thing.*

Vivienne's use of the discussion boards was regarded by her as critical to her learning and was also an important factor in her sense of connection to other students and to her tutors:

*I would actually log in every day. I would always check the boards and the posts. Even if I didn't answer...Doing this on a daily basis made me feel connected to what I was doing and again I grew to really enjoy that aspect of the unit.*

Once again it is her attitude to learning that stands out in her use of the discussion boards, Vivienne describing this attitude as:

*This is all positive, this is all constructive, we are not necessarily going to get things right... I associated that more in a learning sense where we are connecting with our tutors and peers, asking for help on questions and assessments, not only general information but particularly if there was something I didn't quite understand*

Also acknowledged by Vivienne as important was an opportunity to apply that learning in a professional context. The special developmental

school where Vivienne works was the context for this applied learning. One example of her application of learning came from a rhythm task that was modelled in a demonstration video. The task was the learning of a rhyme through multiple means, including: walking the beat, clapping, actions, chanting, identifying and using ostinati. Vivienne applied this task with three high needs Grade One students all of whom had developmental speech issues. All students in this group were repeating a year of education, and none of them had any conception of the alphabet or of rhyming words. Vivienne recalls the experience:

*They got a rhythm and a rhyme and were able to take their voices to more of a musical level. I did this with just the four of us and by the end of the month we all knew it...they related to the imagery... It took a long time for them to get to that stage of completion, but every step they had learnt something else they could achieve. Watching them realise [this] was amazing. They performed it in front of the grade and it was wonderful.*

Again, what is of significance in this instance is the attitude to her own learning that Vivienne displays in talking about this event:

*I had a sense of joy. I looked at these children and thought, do you know what? Everyone can learn... As a teacher I realise it's up to me to find the key that unlocks the most...It's a joyful experience to watch these children achieve in their own right and way. I just took away a sense of achievement. I was proud of them and they were proud of themselves and wanted to perform for others. There was no hesitation or fear. They basically became teachers for the rest of the grade. That was quite profound.*

Vivienne's experience of e-learning in Music education illustrates the depth of learning and engagement with Music education that is possible in this mode. In this case the e-learning mode enabled Vivienne to overcome her fixed ideas of her own musical abilities and to

challenge her assumptions about the value of Music in education. Furthermore her e-learning experience in Music education was impacted by her application of learning to a professional context, ensuring that her learning in Music education was transferred into practice.

## Conclusions

This case study of e-learning in Music education supports earlier conclusions about the use of demonstration videos (Baker, 2011b; 2013a), the use of discussion boards (Baker 2011a; 2012) and student engagement (Baker & Pittaway, 2012). The case study of Vivienne's experience adds to these conclusions substantively through the investigation of the particularities of her case, and as Burns (1998) suggests "by showing that things...might be so in other cases" (p. 365). Specifically Vivienne's case highlights the significance of positive attitudes in this mode of learning, such as: risk taking, personal motivation and persistence.

In returning to the area of inquiry stated earlier, the capacity of online learning to at the very least maintain outcomes in Music education for pre-service teachers, what does Vivienne's case illuminate for Music educators? Her initial disengaged attitude is a common one amongst pre-service teachers, yet she did nonetheless, within the limitations of asynchronous learning, go through a fundamental shift in her attitude, and more significantly a shift in the behaviours exhibited in her own teaching. This could be characterised as a shift from an undervaluing to a valuing of Music in her teaching practice. If this positive valuing of Music by pre-service teachers is integral to positive outcomes for them, then Vivienne's case is significant.

The positive attitude to her own learning is significant in this transition, featuring risk taking, personal motivation and persistence as it does, however, it could be argued that these dispositions are common to many successful students

regardless of their mode of learning. The question regarding the capacity of an e-learning mode to deliver outcomes for students in Music education seems in her case however to be clearly in the affirmative. The question then surely becomes what can an e-learning mode in Music education do that is qualitatively different to the face to face mode? In what ways can the affordances of this mode be harnessed to ensure that what is so in Vivienne's case is so in many other cases?

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